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THE HARVARD-NEWTON BULLETINS

NUMBER III

BRIDGING THE GAP

THE TRANSFER CLASS

BY

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PREFATORY NOTE

THIS statistical study of Transfer Classes in the Newton schools deals with three distinct groups of pupils, viz.: the class of 1912 of the Newton High School; Certificate (Transfer) Classes, with immediate entrance to the Newton High School, in the years 1906-07-08-09; and the Transfer Classes, requiring one or two years to complete the work for the grammar school diploma, in the Technical High School for 1910. It is upon the results of this statistical study, upon such opinions as were secured from those in charge of the plan, and upon the place that the plan takes in a school system which strives to serve the needs of all its pupils from five to eighteen years of age that the conclusions reached concerning the efficacy of Transfer Classes are based.

In preparing the section of the investigation dealing with the Transfer Classes in the Technical High School, interesting studies by Miss Mary A. Laselle and Mr. C. W. Waldron (teachers in charge of such classes) were freely drawn upon.

F. W. WRIGHT.



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BRIDGING THE GAP

TRANSFER CLASSES IN THE NEWTON SCHOOLS

I

PLACE AND PURPOSE OF TRANSFER CLASSES

The policy represented by the "Transfer Classes" in the public school system of Newton, Massachusetts is well stated in the following paragraphs from the report of Superintendent F. E. Spaulding for 1912:—

The Newton schools are trying to educate all boys and girls in the city from about four or five to about eighteen years of age; the schools are trying to educate every one of these children and youth with individual discrimination, that is, to develop the natural capacity of each so that he will be able and disposed to render the largest possible service to society—throughout his life beyond the school.

We are convinced of the supreme educative importance of the period from fourteen to eighteen, and we are planning and striving most earnestly to hold boys and girls in school through this period.

This is the dominant note in the administrative policy of the Newton schools. In it we find the reason for the Transfer Classes. One recognizes herein not only the policy of a single progressive school system, but a policy that is becoming more and more pronounced in progressive school administration the country over. This policy is the subordination of fixed curricula and arbitrary standards to the varying needs and abilities of the pupils in the schools.

To be sure, this policy is subject to the unfavorable criticism of those who still believe that a high percentage of failure to reach a fixed standard of ability, through a more or less prescribed and formal course of study, is at once an indication of strength in the school, and an evidence of weakness in those who fail. But such

persons seem to be unaware of the remarkable change that has come over both the curriculum and the method of administering it; they do not see that too many students fail, not so much on account of lack of ability, as from lack of adaptability to the formal requirements the schools have set up. And they do not seem to realize the significance of failure to pupils at the age when a Transfer Class would provide some means of carrying them forward to a newer, and, for them, more rational plan of work. Adolescent failure is both pointed in its immediate effects, and permanent in its ultimate influence upon the life of the pupil who acquires the habit of facing it.

In addition to the personal effects of failure in advancement to the high school, or after pupils have once gained the coveted honor of regular promotion, we have to reckon with the feeling on the part of the public that our secondary schools have not yet justified the great expense at which they are maintained. If we set up an arbitrary standard which is to act as a barrier to many, we shall have difficulty in defending the problem of elimination that presents itself, both at the portals and within the high school. People are coming to see that the high school is getting too few and losing too many of the pupils.

Many discussions, largely academic, have taken place on "bridging the gap"; many plans have been suggested, and some tried, for retaining the weak pupils in the high school; but in the Special Transfer Classes of the Newton High Schools we have not only a means of "bridging the gap" — or we might better say the chasm which separates the elementary and the secondary school for the over-age or retarded pupil — but we have, also, a special method of providing for his peculiar needs after he has been transferred to the high school.

II

We now turn to a brief sketch of the development of these classes in the Newton schools.

In 1906, in the various districts of the City of Newton, two kinds of diploma were given to the graduates of the grammar

schools; first, a diploma of graduation which did not admit to the high school; and, second, a diploma with special recommendation, which did admit to the high school without examination. Later, all grammar school diplomas admitted to the high school, together with the plan — and here begins the transfer idea in its most conservative form — of making all “slow pupils” the subject of special investigation by a committee — this committee to be composed of the Superintendent of Schools, the principal of the grammar school, the teacher of the pupil, and the principal of the high school. The committee set one question before itself in taking up each case: Assuming that this pupil is going to school next year, where will he profit most? If the pupil was over-age, the decision usually admitted him to the high school.

As a result of the foregoing practice the following rule of the School Committee made Transfer Classes a recognized part of the administration of the schools:

Certain pupils who have spent a year or more in the eighth grade, but whose standing is not fully up to the prescribed standard for section four (a general average of *C*, not below *D* in arithmetic, language, and grammar, and not below *E* in any subject) may be admitted to the high school without examination.

For the purpose of determining what pupils may be so admitted, a committee consisting of a grammar school principal (acting only when pupils from his school are under consideration), the principal of the high school, and the superintendent, shall consider individually, during the last quarter of the eighth year, all pupils whose ranking falls below the standard for regular promotion. This committee shall decide each case on its merits, the main consideration being the welfare of the pupil. This committee shall determine also the conditions under which each such pupil may be admitted to the high schools, including the courses therein which he may enter without examination, and the number of periods per week which he may carry.

All pupils admitted to the high schools under Section 8 may graduate from the grammar school with their class, and shall receive a formal certificate stating what they have done.

And in addition, for convenience, these pupils shall receive cards, signed by the grammar school principal, stating the conditions on which they are entitled to admission to the high school, in accordance with section 8. — *Rules of Newton School Committee*, Sections 8 and 9.

We must here note that the first transfers were made on certificate to the Newton High School — then the only secondary

school in the city — and that they were made only from the over-age pupils. No special provision was made for these pupils; they were obliged to fit into the regular curriculum of the high school, and to carry the work in competition with pupils who had received regular promotion. How well they were able to do this will be seen in the section devoted to the study of the grades for these pupils.

With the opening of the Technical High School, the interest in Transfer Classes shifts in September, 1910, to this school, although a few transfers were made to the Newton High School subsequent to this time. That the policy had succeeded under the most exacting conditions in the Newton High School will be seen both in the study of grades, and in the following from the annual address of Superintendent Spaulding for 1910, which may be regarded both as a recognition of the value of the policy and a determination to push it farther as an administrative principle:

A Significant Innovation

Of the considerable number of innovations which have been introduced into the administration and organization of our schools during quite recent years, few are more significant than the transfer this September, (1910) from the grammar schools to this Technical High School of certain pupils who had earned neither diploma nor formal certificate of admission, who had not even gone through the minimum requirements of the grammar school course. Anyone familiar with and sympathizing with the jealous watch set almost universally over the entering portals of all high schools laying any warrantable claim to excellence, will at once recognize in this a quite unusual, if not an unparalleled, proceeding. Admit pupils to the associations, the standing and the advantages of a high school because they are fifteen years of age! What more startling, revolutionary proposition would it be possible to make to anyone accustomed to see in arbitrary, scholastic standards the very foundations of every high school worthy the name? Yet we have not merely made this proposition; we have already put it into effect.

Let us see just what we have done in this matter and why; for it is a matter not merely typical, strikingly typical, of our practical determination to reverse the usual relation and make our organization and all our efforts serve the evident needs of all our children, it is a matter in which we all have direct concern, a matter growing out of conditions for which every one of us is in some measure responsible. From the grammar schools throughout the city we have transferred to this Technical High School about seventy-five pupils, three groups, two of girls and one of boys. The main considerations

on which a transfer was made were these: the pupil would be at least fifteen years of age this September — many of them are considerably more than that; he had done work of the eighth grade last year, though he had not necessarily met the regular standards or completed the work of that grade; in the usual course of events, he was not likely to continue in any school more than a year or two.

It is confidently believed that these conditions can be better met, that much more can be done for these pupils in this high school than it would be possible to do for them in the grammar schools. And they are here. True, they are not pursuing a classical, a scientific, or even a conventional, general course. They are doing far better; they are pursuing a course made for them. It is a high school course, and they are high school pupils!

It Depends Upon Our Will

Evidently here is a very practical problem, a universal and omnipresent problem, which we must study and solve, as it were together, and at the same time alone, each one in his turn. The one definite suggestion which I will make at this time, is this. Each one of you is capable of turning during this year every one of her pupils, who is not actually defective, in the direction of regular admission to high school, no matter how far the candidacy for a special transfer has progressed; I am confident that this is fully within your power if you are a teacher below the eighth grade. How? Just *do it*; that is the best direction that can be given without going into details that would be out of place here. This suggests that the matter is primarily a question of your will, of your determination.

I am not making a statement now that is only theoretically true, but practically barren. This statement, which is well-considered, seems to me justified by abundant observation. There are teachers in every grade in this city — would that their numbers were multiplied — who will take any reasonable sized class of children, in which are the usual number of derelicts, and bring them all on at the end of the year, or earlier, into the work of the next grade, each one growing in self-direction and self-control, developing mind and character, every one on the road to success. There are other teachers in this city — I fear there are some in every grade — who seldom rescue any of the little pupil derelicts whom they receive from the grade below, who even allow the number of such unfortunates to increase under their very eyes.

Now, the most fundamental difference which I have been able to discover between these two types of teachers is this: The one determines, or rather, is in an habitual state of determination, that every pupil placed under her charge can and shall apply himself energetically to the tasks assigned him; and she is as confident as she is determined, confident that every pupil will master those tasks. The other is convinced from the first day that she has pupils assigned to her who are unfit for her grade, who are quite incapable of doing the work of her grade; she has had just such pupils before; she was never able to send them on to the next grade adequately prepared; and she

is quite sure that nobody could make good students out of such hopeless material.

As we make these observations, we are forced to conclude that the habit of failure, and the twin habit of expecting but a moderate degree of success, are habits not confined to the children we teach. And we reflect on the strength of example in comparison with mere precept. And we leave further reflection and appropriate action to each one who may feel concerned in this matter.

How far the above conception of the possibilities of Transfer Classes in saving children to the school for further training may be realized in practice will be seen in the later discussion of typical classes of boys and girls. For the present it is well to keep in mind the statement: "A little deficiency in knowledge of arithmetic, grammar, geography, and other elementary school subjects is not in itself a matter of great moment when considered from the standpoint of the pupil's efficient development." Here we have the issue clearly drawn between those who insist upon rigid standards and strict adherence thereto, and those who have no standard so fixed that the individual welfare of the pupils must suffer in consequence. Of course, the issue will turn about how far the flexible standard is used in opening the door for all to enter the high school, and how far the rigid requirement acts as a barrier to many who would otherwise enter. No one can fail to see, however, that Dr. Spaulding's statement signalizes radical departure from a condition that exists in too many school systems, to-day. Surely the Transfer Classes may be looked upon as one of the "educational life-saving stations" which the elimination of too many pupils from school without even a completed elementary education shows that we greatly need.

In 1913, in a foreword to a pamphlet, *A Novel Experiment*, by Miss Laselle, Dr. Spaulding reaffirmed, in even stronger terms, his belief in the Transfer Class, when he said, "Every boy and girl of high school age belongs in the high school regardless of the completion of a grammar school course. It is the function of the high school to welcome every such boy and girl and to adapt subject-matter, methods and organization to the needs of such boys and girls. The only conditions of admission to the high

school and of retention therein to be imposed upon the young person of high school age are that such young person be educable and that he try according to his ability."

Based, as it is, on seven years of trial and observation, this statement may well arrest the attention of others seeking to remedy a condition that has made of our schools a veritable burial ground of the hopes and ambitions of many parents and pupils. The sweeping statement that the school should receive all such persons and adapt subject-matter, methods, and organization to their needs, need not deter any one from trying the plan on the ground that it is not practicable. Transfer Classes in the Newton schools are not theory; they are practice. In a surprisingly simple and effective way they are accomplishing what many might say cannot be accomplished on account of administrative difficulties.

It is the purpose of this study to show, so far as possible, how this plan has justified itself. Evidence of success has not been lacking owing to two studies made by Miss Laselle and Mr. C. W. Waldron of the faculty of the Newton Technical High School. Their work has been freely drawn upon by the present writer in preparing the history of those pupils transferred to the Technical High School.

III

As has been indicated, the transfer idea originated in connection with the Newton High School, and it is to the pupils transferred to that school that we shall first turn our attention. We shall present a somewhat detailed discussion of what these pupils actually did under the provision admitting them to the high school without regular promotion.

In order to secure some basis of judging the value of their work, it was determined to take the pupils of four transfer or certificate groups, 1906, 1907, 1908, 1909, and to compare them with a class regularly promoted. This served the further purpose of enabling us to form some notion of the way in which the Newton High

School was grading its pupils, adapting its work to them, and how it was meeting the problem of elimination. The class of 1912 was taken for this purpose, owing to the fact that it was the last class having nine years in the elementary school. Nine years was also the amount of preparation of practically all of the certificate pupils.¹

Numerically, then, we had the following conditions to deal with in making the study in the Newton High School: transferred in 1906, 22 boys and 7 girls; transferred in 1907, 7 boys and 11 girls; transferred in 1908, 7 boys and 9 girls; transferred in 1909, 3 boys and 4 girls (the small class in 1909 was due to the opening of the Technical High School), giving a total of 39 boys and 38 girls as the basis of this part of the study. The class of 1912 showed an entering enrolment of 327 and a graduating class of 220. This group was used as the basis of comparison for the reasons above indicated.

Among the most pressing problems of secondary school administration is that of grading; in this field some of the most interesting and profitable studies have been made. It seemed advisable, therefore, to determine, not the accuracy of the grading, but the distribution of the grades in the two groups of pupils under consideration. This furnished, at once, a definite method of comparison, owing to the fact that both groups — the certificate pupils and the class of 1912 — did the same work under the same conditions. Accordingly, a tabulation of all grades, and their distribution in groups of five, extending from 35 per cent to 100 per cent, was made. Tables showing this tabulation will be found on the following pages.

¹ "Certificate pupils" in this paper always means the classes transferred to the Newton High School with immediate entrance on high school work.

TABLE I

TABLE SHOWING GRADE¹ TOTALS FOR EACH GROUP IN DISTRIBUTION FOR EACH YEAR, CLASS OF 1912 AND PUPILS TRANSFERRED TO NEWTON HIGH SCHOOL IN 1906-07-08-09.

Certificate Transfers²

Grade Distribution Groups		35-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-100	Total Grades
	Yr														
Class 1912		8	7	13	30	72	157	244	309	389	174	100	23	3	1529
Transfer	1	13	16	23	32	52	54	53	57	32	15	3	0	0	350
Class 1912		7	0	6	18	29	97	147	216	186	148	85	44	4	987
Transfer	2	1	4	9	26	35	42	42	34	16	10	5	0	1	225
Class 1912		0	0	1	18	31	91	118	154	147	110	67	29	4	770
Transfer	3	3	6	3	10	9	16	45	35	34	15	12	3	1	192
Class 1912		3	1	0	4	22	68	114	161	127	95	53	23	9	680
Transfer	4	0	2	0	3	5	20	13	16	5	4	4	1	0	73
Total grades each group		18	8	20	70	154	413	623	840	849	527	305	119	20	3066
		13	16	23	32	52	54	53	57	32	15	3	0	0	840

¹ The word grade as used throughout this investigation refers to the mark given for a year or a half-year of work in any subject.

² See Tables II and III for per cent of grades in each group.

TABLE II

PER CENT OF GRADES IN EACH GROUP FOR EACH YEAR¹

Certificate Pupils and Class of 1912, Newton High School

Grade		35-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-100
	Yr											
Class 1912	4	.6	.6	3.2	10.	16.7	23.7	18.7	14.	7.8	3.3	1.3
Transfer	4	2.8	4.1	6.9	27.7	18.1	22.2	7.	5.5	4.1	1.4	0.
Class 1912	3	.1	2.3	4.	11.8	15.3	20.0	19.1	14.3	8.7	3.7	.5
Transfer	3	10.	4.9	8.4	23.5	18.4	17.3	7.9	6.3	1.6	.5	.5
Class 1912	2	1.3	1.8	2.9	9.8	14.9	21.8	18.8	15.	8.6	4.4	.4
Transfer	2	6.2	11.5	15.5	18.7	18.2	15.1	7.1	4.4	0	0	0
Class 1912	1	1.8	1.9	4.7	10.3	15.9	20.2	25.4	11.3	6.5	1.5	.2
Transfer	1	14.8	9.1	14.8	15.4	15.1	16.3	9.1	4.3	.9	.0	.0

¹ It will be noted that all grades in distribution groups below 50 per cent are combined in the percentage table.

TABLE III

PER CENT GRADES IN EACH GROUP FOR FOUR YEARS

Grade		35-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-100
	Yr											
Class 1912	4	1.1	1.8	3.9	12.7	15.7	20.2	21.4	12.3	7.7	3.	.5
Transfer	4	10.4	8.3	12.9	19.2	17.	16.8	8.	4.9	1.7	.24	.24

One must keep in mind, while studying the results set forth in the foregoing tables, that we have here a comparison between what might be regarded as unquestioned success and at least partial failure, when judged by the same standard. Any reasonable evidence of success on the part of the transfer (certificate) pupils must be seen on the background of the expected success of the selected group who made up the class of 1912. This makes the showing of the certificate pupils all the more creditable on the side of merit, and less pointed on the side of weakness in attaining the higher standard of the other group. To expect the certificate pupils to do even approximately as well as the pupils regularly promoted would be to look for a condition that the transfer idea was not designed to create, and to arouse a suspicion that either the regular pupils were receiving too little or that the certificate pupils were being credited with more than they actually accomplished. To say the least, the results set forth in the foregoing tables seem to warrant the assertion that the certificate pupils have amply met what might be expected of them, and so justified the wider extension of the plan and the enthusiastic support of those responsible for its execution.

These results suggest, further, some interesting studies of grading in the Newton High School — regular classes — over a series of years, and in comparison with similar distributions of grades from other schools. All such studies of grades, whether of regular or special classes, serve to focus attention on the problem of grading, and so to bring it nearer the scientific condition we would have it attain.

The general tendency shown in the tables to higher grading in the regular class is what we might anticipate, although one is not a little surprised to see the comparatively high percentage of grades of the certificate pupils in the higher groups. A preponderance of lower grades is the rule for the certificate pupils, though not to a degree that indicates on the part of these pupils the lack of power to succeed. The high percentage in the first distribution group is due to the grouping of all grades below 50 per cent; the table really becomes more significant, poses, with the second distribution group. The general tendency to normal distribution in the class of 1912, and the equally general lack of normal distribution in the transfer class, is what we might expect in view of the nature of the two groups under consideration.

ELIMINATION

A second vital and interesting aspect of the Transfer Classes is the extent to which the pupils leave school without being graduated. One naturally asks the question, when considering the Transfer Classes: How far does this plan succeed in holding the pupils in school? It must be remembered that practically all of the transferred pupils would have left school as soon as they were released by the compulsory attendance law, and because they had failed to secure promotion — usually after repeating the work in the eighth and other grades. Interesting and surprising results are set forth in the tables on the following pages.

Among the striking features brought out by the study of elimination are the following: (a) the high per cent of pupils of the class of 1912 remaining at the end of each year and for graduation; (b) the highly favorable showing made by the transfer pupils when compared with the studies set forth on pages 16 and 17. It is noteworthy that the per cent of those completing the full four years in the Newton High School, class of 1912, is almost double that for any of the four studies shown; and that the per cent of the certificate group completing the full four years is as high as the average for the four studies. Surely this is enough to direct attention to the merits of this plan.

TABLE IV

TABLES SHOWING INITIAL ENROLMENT AND PER CENT THEREOF REMAINING
AT THE END OF EACH YEAR AND AT GRADUATION FOR CLASS OF 1912
AND THE TRANSFER PUPILS TO NEWTON HIGH SCHOOL.

Total number enrolled, Class of 1912, Sept., 1908	327
Number remaining at end of first year, June 1909	285 % remain. 87.1
" " " " " second " " 1910	277 % " 84.7
" " " " " third " " 1911	249 % " 76.1
" " " " " fourth " " 1912	231 % " 70.6
Number graduated, June, 1912	220 % grad. 67.3

Total number transferred to Newton High School by certificate for years 1906-07-08-09	77
Number remaining at end of first year	67 % remain. 87.
" " " " " second " "	49 % " 63.6
" " " " " third " "	34 % " 44.1
" " " " " fourth " "	29 % " 37.8
Number graduated in four years	22 % grad. 28.6

TABLES SHOWING DISTRIBUTION OF PUPILS IN THE PUBLIC HIGH SCHOOLS
OF THE UNITED STATES

TABLE V

Year	1	2	3	4
Per cent.	100	63	44	30

According to Thorndike, *Bulletin* No. 4, 1907, p. 11, U. S. Bureau of Education.

TABLE VI

Year	1	2	3	4
Per cent.	100	48	35	25

According to Ayres, *Laggards in Our Schools*, p. 57.

TABLE VII

Year	1	2	3	4	Graduated
Per cent . . . 100		65.3	42.9	32.4	31.4

According to statistics compiled by U. S. Bureau of Education, *Bulletin* No. 22, 1912, pp. 9, 19. 8960 schools reported.

TABLE VIII

Year in High School	YEAR			
	1907-08	1908-09	1909-10	1910-11
1	100 %	100 %	100 %	100 %
2	62.8	62.1	63.2	62.5
3	41.3	41.2	41.6	42.
4	27.1	27.8	28.4	29.2
Schools Reporting	8960	9317	10313	10234

According to figures compiled by U. S. Bureau of Education, *Bulletin* No. 22, p. 9.

NOTE. — No comparison of these and the preceding elimination tables is possible, other than on a general basis, owing to the fact that the above figures deal with the per cent remaining at the opening of each year, while those for the Newton High School show the per cent remaining at the end of each year. However, the general tendency is well set forth by the above tables.

QUALITY OF WORK DONE BY TRANSFER PUPILS

In addition to the problem of grading and that of elimination, such a study naturally suggests an investigation into the kind of work these pupils do, and the degree of success they attain in the doing it. An attempt was made, therefore, to determine what were the facts. The results of this part of the investigation are set forth in the tables given below.

It must be kept in mind, in a study of these tables, that no special provision was made for the certificate pupils in the Newton High School. As has been indicated, they were obliged to adjust themselves to the curriculum and organization of the school as they found it. The curriculum, as might be expected in a general high school, tended to emphasize the importance of college preparation, and gave little opportunity to meet the peculiar needs of this group of pupils. Aside from a little work in bookkeeping and food preparation, the curriculum was plainly that of the general high school working in the direction of "general culture" through, to be sure, a somewhat flexible, yet very limited, field of electives. The great opportunity to be found for such pupils in the Technical High School was not yet available. One is not at all surprised, therefore, to see high percentages of failure in French, German, Latin, algebra, and

even English and history. Pupils who are unable to meet a standard requirement in the work of the elementary schools are not apt to rise to the occasion in such subjects as those just enumerated, especially when no attempt is made to adjust these subjects to the peculiar needs of the certificate pupils. (Chart No. I on the following page is suggestive in this connection; the conclusion is obvious.)

The following tables and charts aim to set forth the number of units (a year's work in a subject) taken by the class of 1912 and the certificate pupils, together with a comparison on the basis of the per cent of work passed by each group.

TABLES SHOWING NUMBER OF UNITS OF SUBJECTS TAKEN BY CLASS OF 1912 AND TRANSFER PUPILS, TOGETHER WITH THE NUMBER OF UNITS OF FAILURE AND THE PER CENT OF FAILURE IN VARIOUS SUBJECTS.¹

TABLE IX

Class of 1912

Subject	English	History	French	Latin	German	Algebra	Geometry	Physics	Drawing	Bookkeeping	Chemistry	Arithmetic	Botany	Phys. Geog.	Food. Prep.	Physiology	Greek
Number of units taken	673	584	445	328	299	250	214	208	127	83	59	53	39	37	36	31	26
Number of units failure	33	29	31	14	7	14	17	11	9	3	2	2	1	0	0	0	0
Per cent of failure	5	5	7	5	2.4	5.6	8	5.2	7.1	3.6	3.4	3.9	2.9	0	0	0	0

TABLE X

Certificate Pupils to Newton High School

Subject	English	History	French	Latin	German	Algebra	Geometry	Physics	Drawing	Bookkeeping	Chemistry	Arithmetic	Botany	El. Science	Biology	Stenography	Typewriting
Number of units taken	190	164	83	21	26	49	25	41	87	41	12	21	21	41	8	7	11
Number of units failure	58	53	36	8	12	21	7	12	10	4	2	3	5	9	1	2	1
Per cent of failure	31	33	43	38	43	42	28	29	12	10	17	31	24	22	12	29	9

¹ See charts I, II, III, and IV, which follow immediately, for graphic representation of the above data.

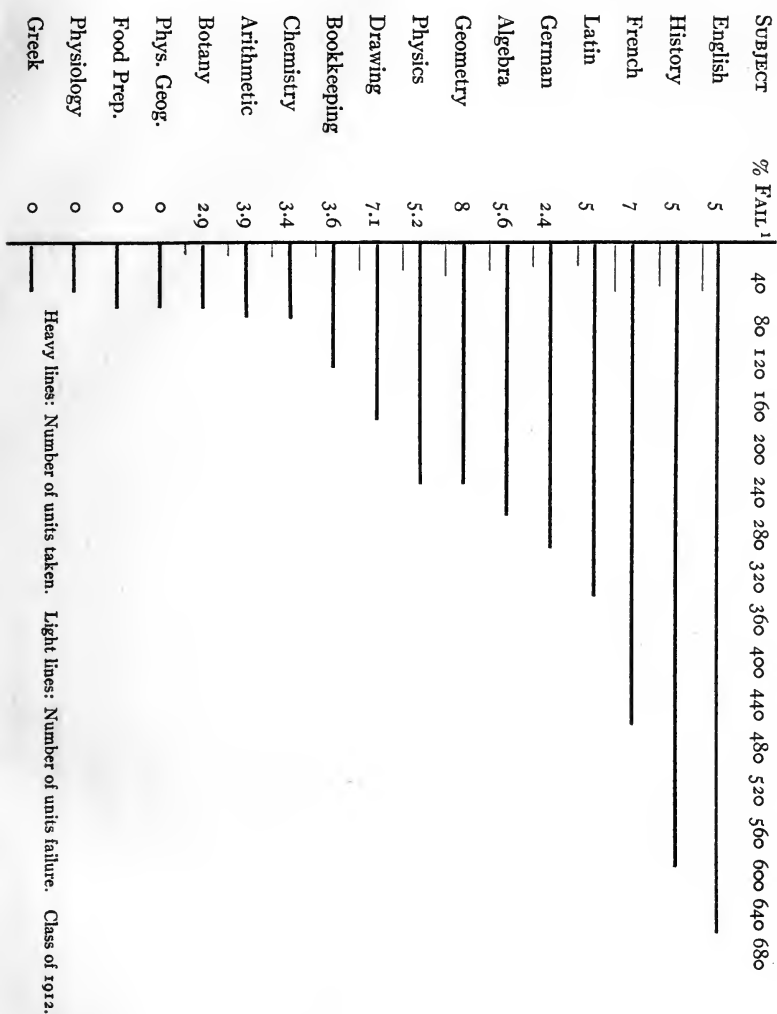


CHART I. — Showing number of units taken in each subject by class of 1912 with number of units and per cent of failure for each subject.

¹ Indicates per cent of total work in each subject that was failure.

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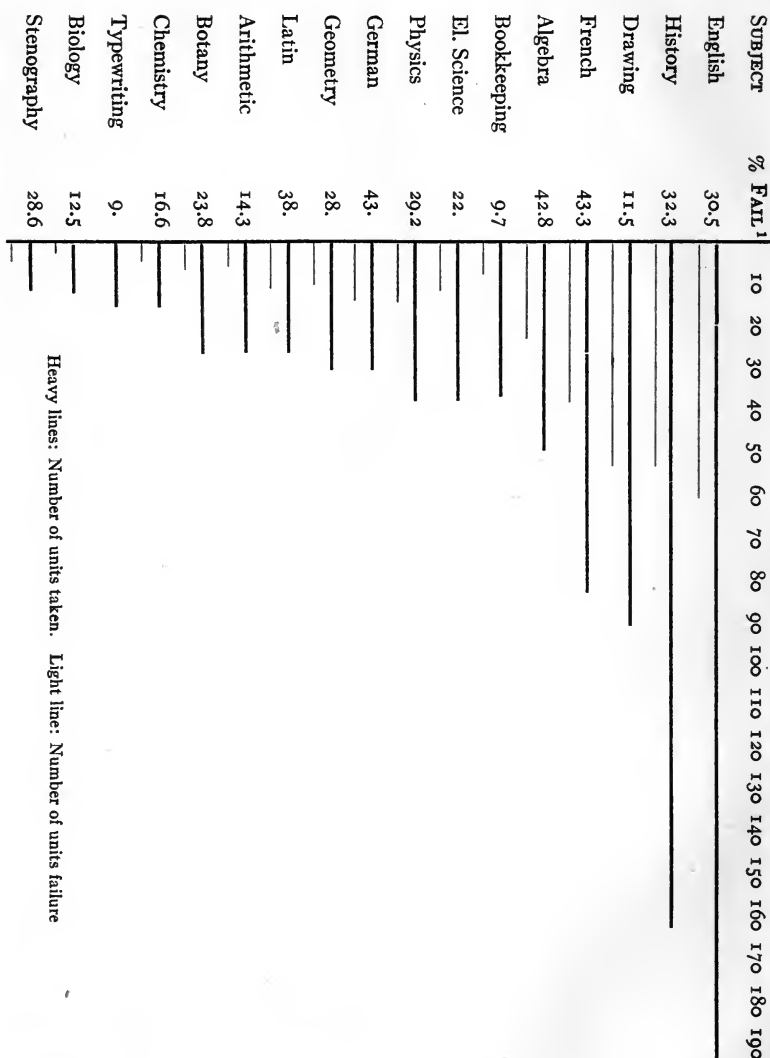
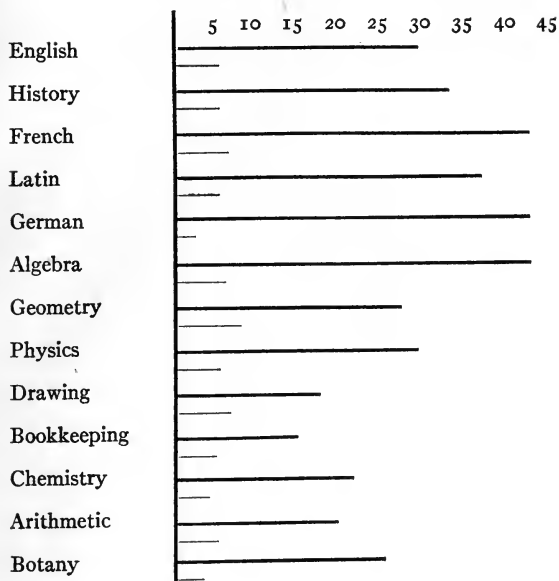


CHART II. — Units of work in each subject for certificate pupils with units and per cent of failure in each subject.

¹ Indicates per cent of total work that was failure.



Heavy lines: Certificate pupils, Newton High School. Light lines: Class of 1912.

CHART III. — Showing per cent of failure of total work taken in common subjects by class of 1912 and certificate pupils.

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SUBJECT	%	PASS ¹	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
Typewriting		91.																		
Bookkeeping		90.3																		
Drawing		88.5																		
Biology		87.5																		
Arithmetic		85.7																		
Chemistry		83.4																		
El. Science		78.																		
Botany		76.2																		
Geometry		72.																		
Stenography		71.4																		
Physics		70.8																		
English		69.5																		
History		67.2																		
Latin		62																		
Algebra		57.2																		
German		57.																		
French		56.7																		

CHART IV. — Showing per cent of work passed in each subject by certificate pupils to Newton High School.

¹ Indicates per cent of work passed. (See chart II.)

Noteworthy features of these results are the low per cent of failure in practically all subjects in the class of 1912, the relatively high per cent of failure on the part of the certificate pupils in the so-called cultural and "disciplinary" subjects, and the not unfavorable showing made by these same pupils in other than the formal subjects.

It might be of interest at this point to suggest a study made by Messrs. C. R. Rounds and H. B. Kingsbury¹ in which, among other things, they seem to show that failure in high school English (forty-six schools were studied) was approximately 21 per cent, and for high school mathematics, approximately 24 per cent. On this basis the 5 per cent failure in English and the 6 per cent (average) failure in mathematics for the class of 1912 Newton High School is highly favorable; and the 31 per cent failure in English and the 34 per cent failure in mathematics for the certificate pupils is not without some reflection of credit upon this group.

In connection with the foregoing comparison, it must be kept in mind that these certificate pupils were given high school work immediately upon their transfer to the high school, and that this work was done in competition with their fellows who had come up from the grammar school through the regular channels of promotion. These are the pupils whom we are accustomed to regard as the failures, the waste product, when judged by our elementary school standards of determining advancement.

WAS THERE GENERAL TENDENCY IN THE SCHOOL TO GIVE PASSING GRADES ?

Supplementary to the comparative study of grade distribution in the class of 1912 and the transfer pupils, and for the purpose of determining whether the low per cent of failure in the class of 1912 was due to abnormal grading toward the passing mark, two subjects, Latin and geometry were taken, and the grades distributed. The results of this part of the investigation are as follows:

¹ Do Too Many Pupils Fail ? *School Review*, November, 1913, pp. 585-97.

While there is a rapid rise in the distribution curve for geometry in the first group, on the safe side of the passing mark, 60 per cent, and while 49 per cent of the grades are in the groups 61-75, with the mode at 66-70, with a rapid fall to a second tendency to group about a mode at 81-85, it can scarcely be said that the whole distribution is such as to indicate a desire to pass pupils even though the majority have low grades. A general tendency to lower grades, and a tendency to a bi-modal curve is not surprising in such a subject; mathematical ability is apt to be found in two degrees of general excellence.

The curve for Latin is almost a normal distribution, with but 11 per cent of the grades in the first group beyond the passing mark, as compared with 15.6 per cent in the same group for geometry. The mode in this curve lies at 71-75, or one step beyond the mode for geometry. In this, as in the distribution for geometry, there is no evidence of abnormally low grading with a tendency to pass pupils.

AGE AT ENTRANCE

Significant in any study of this kind is the age at which pupils enter the high school, either as transfers or pupils regularly advanced. One has but to look into this aspect of the subject to see a reflection of the whole problem of retardation and over-age that is causing so much discussion. When one finds, in an entering class of 327, thirty-seven pupils under fourteen years of age, with one but eleven, and forty-three who are sixteen or over, with one eighteen years and five months of age, he realizes that the high school, as well as the elementary school, has wide age-variation to deal with. And with the rapid development of the adolescent period of life, this variation is more serious in the high school than in the elementary school.

It is interesting to note that the median age for the class of 1912 was fourteen years and eleven months, or about where it might be expected, were the distribution normal, on the basis of nine years in the elementary school.

The median age for the certificate pupils to the Newton High School was fifteen years and three months.

The tables which follow show the age distribution of the class of 1912 and the certificate pupils to the Newton High School. It is clear that if these distributions were plotted we should find that the curves are bi-modal, with a decided skewness to the right for the transfer pupils; this is in keeping with the aim of the Transfer Classes — the caring for the over-age pupil in an environment suited to his best interests. This adaptation is further emphasized with the classes transferred to the Technical High School, considered later in this investigation.

TABLES SHOWING THE AGE DISTRIBUTION OF THE CLASS OF 1912 AND THE CERTIFICATE PUPILS IN THE NEWTON HIGH SCHOOL.

TABLE XI

Class of 1912

Age	Per cent	Age	Per cent
11:0-11:114	15:0-15:5	20.6
12:0-12:5	1.1	15:6-15:11	13.
12:6-12:118	16:0-16:5	6.8
13:0-13:5	5.	16:6-16:11	3.4
13:6-13:11	6.9	17:0-17:5	3.
14:0-14:5	19.4	17:6-17:11	2.3
14:6-14:11	16.3	18:0-18:58
Median age.....14:11			

TABLE XII

Certificate Pupils

12:6-12:11	2.6	15:0-15:5	24.
13:0-13:5	1.3	15:6-15:11	13.3
13:6-13:11	6.6	16:0-16:5	18.7
14:0-14:5	14.6	16:6-16:11	2.6
14:6-14:11	12.	17:0-17:5	4.
Median age.....15:3			

It is hoped that the foregoing discussion of the Transfer Classes in their origin and development to their present form, in the Newton High School has been sufficiently complete to demonstrate their value and practicability. As has been indicated, the Transfer Classes are now found in the Technical High School;

and to this phase of the movement we shall turn in the next section. But the success of the transfer plan in the Newton High School may well commend some such arrangement to school authorities elsewhere, even though there be no well-equipped technical school in which to provide the most favorable conditions. Most small cities and towns must rest content with the general high school such as that to which the transfer pupils first came. But the practicability of the plan in the Newton High School should — with such freedom of election and readjustment as modern school administration can make in almost any type of school — enable a progressive system to provide Transfer Classes for over-age pupils. One needs but refer to the table on page 16 to see what was done for certificate pupils in the Newton High School. That 22 of the 77 pupils studied should have graduated — one of them with honors — is sufficient warrant that a chance to succeed is all that is needed by many whom we have been dismissing, as failures, from our schools. Reference to the tables on page 16 will show how much can be done by way of making a high school education possible, where sympathetic treatment and encouragement are added, for the pupils not only of Certificate (Transfer) Classes, but also for those pupils who are regularly promoted — and this on the basis of just as thorough a standard of work as is required anywhere.

IV

TRANSFER CLASSES IN THE TECHNICAL HIGH SCHOOL

In order to find some basis for determining, as far as possible in such a limited survey, the efficiency of the transfer plan in the Technical High School, the investigation was extended to include a typical group of transfer pupils in this school. Two classes, the transfer girls and the transfer boys of 1910-11, were chosen. No attempt has been made to compare them with a typical class regularly promoted to the Technical High School, owing to the wide diversity of courses in this school, and the great freedom of election given the transfer pupils. Such comparison as is made

is with the certificate pupils in the Newton High School. The two classes chosen, fifty girls and thirty-two boys, give us a group of about the same size as the group studied in the Newton High School. (This group was made up of seventy-seven pupils.)

Inasmuch as the majority of the transfer pupils in the Technical High School, who remain for a high school course, enter the commercial courses, interesting comparative studies might be made, between the transfer pupils in these courses and the regular pupils in these courses over a series of years.

The management of the Transfer Classes in the Technical High School was different from the management of the Transfer Classes in the Newton High School. When the first Transfer Classes were organized in the Technical High School (September, 1910) a special teacher and a separate room were provided for these pupils. Both the manner in which this was done and the need for it are well expressed in the following statement of Miss Laselle, speaking of the girls:

They were given a large, sunny "home room," a cooking and a sewing laboratory that were supplied with every article of equipment that could possibly be required, and a large, well-lighted room for work in design.

The segregation of the class was an important element in the success of the undertaking. Many of the pupils were of the self-effacing, retiring type of pupil, who, in a mixed class, or in a class in which there are rapid workers, is almost inevitably thrust into the background, where she persists in remaining, despite the earnest endeavors of her teachers. With no large element of rapid, of accurate, or more rapid workers to make them timid, the girls developed a self-confidence, and an ability to take a leading part in discussions in English and in other subjects that was very satisfactory, and that has enabled them this year to perform work in the regular mixed classes of the High School in a creditable manner.¹

This plan worked so well that a return to it is now contemplated in the class for boys — the special class for the boys was abandoned two years ago.

To be sure, the teacher is the one great element in the success of any transfer, or segregated, class. Peculiarities in the pupil must be met with an insight on the part of the teacher in charge. In this respect, Newton has been most fortunate in the selection

¹ *A Novel Experiment*, p. 9.

of "transfer teachers" — teachers having the power of substituting the habit of success for the blighting effects of repeated failure.

In addition to the special room and teacher, the Transfer Classes in the Technical High School are provided with a curriculum and a method of adapting its content to them that are in keeping with the needs and abilities of the pupils. Reference to tables XIII and XIV will show the success these pupils had in doing the work.

The following typical programs for the girls and boys will serve to illustrate the adaptation of the curriculum to the pupils of the Transfer Classes:

TYPICAL PROGRAMS

Girls:

1. Ten periods of academic work per week, including commercial geography, hygiene, household accounts, and English.
2. Ten periods of household economics.
3. Four periods of design.
4. One period of physical culture.

Boys:

1. Ten periods of academic work per week, including English, arithmetic, civics, elementary science, and physiology and hygiene.
2. Ten periods of shop-work.
3. Four periods of mechanical drawing.
4. One period of physical culture.

The above are not to be regarded as fixed programs of study; such a program is unknown in the Transfer Classes. Mr. Waldron, who had charge of two of the boys' classes says, "When a boy shows a keen interest in any department, and is anxious to put in more than the required time in that department, he is encouraged to do so." Rigid programs of study, together with rigid standards of attainment, are banished from the Transfer Classes.

It is not to be supposed that loitering, inefficient work, or mediocrity are encouraged in the Transfer Classes; quite the reverse is true. These pupils have come to an environment that does not demand effort, but that stimulates it. Failure here, due to lack of effort, is visited with the same penalty as in the regular classes. The coveted grammar school diploma, which is awarded

at the end of one, sometimes two years in the Transfer Class, is withheld unless the pupil has earned it. But once the diploma has been secured, the transfer pupil sees the barrier to his further progress in the school removed, and he may now enter upon any of the regular courses in the two high schools.

How far the transfer pupils are successful in winning a grammar school diploma by work in the Transfer Classes, and so continuing their education, may be seen from the following data for the two classes under consideration in this section:

Girls transferred, September, 1910:

Number transferred	50
Number remaining one year	45
Number receiving grammar school diploma	35
Number returning for regular work in high school, September, 1911	24
Number returning for second year in high school . . .	19
Number in high school at mid-year, 1914	10

Boys transferred, September, 1910:

Number transferred	32
Number remaining one year	21
Number receiving grammar school diploma	19
Number returning for regular work in high school, September, 1911	17
Number returning for second year in high school . . .	11
Number in high school at mid-year, 1914	8

The foregoing data shows that of the 82 pupils making up the Transfer Classes in 1910-11, 66 remained in school at least another year, striving to earn a grammar school diploma, and that 54 won such diploma; that 41 of those winning diplomas admitting them to the high schools entered the freshman class in September, 1911; that 30 returned for a second year's work; and that 18 were in school at mid-year, 1914. When one reflects on the fact that practically all of these pupils would have left school as failures before having completed the work for a grammar school diploma, he cannot but be impressed with the significance of the foregoing data.

How significant would be such an "educational life-saving station" generally in existence in the public secondary schools of

the United States may be seen from the following estimate. The foregoing data show that 82 pupils entered the Technical High School as transfers in 1910. There were admitted as certificate pupils to the Newton High School for the same year, 8 pupils, making an additional high school enrolment of 90. The enrolment, less all transfer pupils, for entering classes to the Newton high schools for 1910 was 445. In other words, the first-year class in the high schools was increased by 20.2 per cent through special transfers. The total first-year enrolment for the public high schools of the United States for 1910-11 (*Bulletin* 22, 1912, p. 9, U. S. Bureau of Education) was 421,335. Had this total enrolment been increased by Transfer Classes to the same extent as in Newton, the total entering enrolment for the country would have been larger by 85,110 for the year 1910-11. If, then, such a large number of pupils find the door to further education closed on account of the absence of any special means of caring for their special needs, it would seem that we are remiss in our duty unless we make some such provision — Transfer Class or other means — for taking care of these thousands whom we lose annually.

Of interest in connection with the statistics concerning retention in school, are data regarding the courses selected by these pupils. It will be noted that these courses are almost entirely vocational. It should be said here that no course is chosen without guidance from the transfer teacher and others. Special lectures by outside speakers were held, from time to time for the purpose of giving information on the various vocations open to girls and boys with such training as these pupils would be able to secure. With this preparation and advice, the courses entered upon by the 41 pupils returning to the high schools were as follows:

Girls (1911-12):

General Course, Newton High School	2
Extra-Technical (Vocational) Course	6
Fine Arts Course	1
Commercial Course (Clerical) ¹	15

¹ A distinction is made in the commercial courses between training for clerical work and training for business.

Boys (1911-12):

Technical Course	2
Extra-Technical	2
Technology-College Course	2
Commercial (Clerical) Course	7
Commercial (Competitive) Course	3
Special Course	1

As has been pointed out, the work in these courses was done after the pupils entered the high school, and in competition with those who had come in through the regular channels of promotion. The grades of the forty-one who entered the high schools in September, 1911, with those who are now in school, will be found distributed in tables XIII and XIV. All the grades won by all the pupils for whatever time they remained have been included in this distribution. For reasons before given, no group of Technical High School pupils is used in the comparative study of grades. (A suggestion for a study of this kind has already been made.)

TABLES SHOWING DISTRIBUTION OF GRADES FOR 82 PUPILS TRANSFERRED TO TECHNICAL HIGH SCHOOL, SEPTEMBER, 1910. (Two and one-half years' work included.)

TABLE XIII

Number of grades in each group

Grade Distribution Groups		35-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-100	Total
Freshman	Yr 1	4	0	4	2	17	26	48	67	36	11	9	0	0	224
Sophomore	2	2	1	1	6	13	29	35	36	16	9	6	1	0	155
Junior to mid-year	3	4	4	2	2	8	11	22	14	11	5	8	2	0	93
Total each group	2½	10	5	7	10	38	66	105	117	63	25	23	3	0	472

TABLE XIV

Per cent of grades in each group

Grade Distribution Groups		35-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-100	Total
Freshman	Yr 1	0	0	3.5	1.	7.9	11.1	21.4	30.	16.	5.	4.	0	0	0
Sophomore	2	0	0	2.6	3.8	8.3	18.7	22.6	23.2	10.	5.8	3.9	.7	0	0
Junior to mid-year	3	0	0	10.7	2.1	8.6	11.8	23.6	15.	11.8	5.4	8.6	2.1	0	0
For 2½ years		0	0	5.1	2.1	8.	14.	22.2	24.8	13.4	5.5	5.1	.7	0	0

As might be expected, the grades for the Transfer Classes in the Technical High School are higher than for the corresponding years in the Newton High School. The type of pupil whom the Transfer Class aims to assist is not attracted by, or able to pursue successfully, the usual curriculum of a general high school. That they are capable of doing, with no little success, work of a more vocational type is evidenced by the improvement in grades, as well as the lower per cent of failure in work undertaken.

It is probable that the two classes studied in the Technical High School are superior to subsequent classes, owing to the fact that none were transferred from grades below the eighth grade. Transfers are now made from all pupils between fourteen and a half and fifteen years of age in grades as low as the sixth grade. The average age of the girls in the class entering in 1910 was fifteen years and eight months, and of the boys for the same year fifteen years and six months. Further investigation will be interesting in determining the relative standing of the transfers from the lower grades as compared with the earlier transfers from the eighth grade, alone.

Since Transfer Classes began about three hundred and fifty pupils have thus been given the incentive to further work in the Newton schools, and at an annual cost of about \$10,000. How far these pupils justified this expense is, of course, not wholly determinable; but the foregoing study of the work done by some

of them, and the increasing faith in Transfer Classes by the teachers and officials of the schools seem to warrant the belief that the effort and money were well expended. That many of these pupils did not attain the standard of regularly promoted pupils is far less important than the fact that many did achieve a standard that made reasonable success, and not a sense of failure, their possession at the threshold of life's responsibilities. The transfer pupil is not less worthy of an opportunity to succeed than is the pupil who regularly makes promotion to the high school. All that should be demanded is that he be educable, and that he strive to make the most of the ability he has.

In the course of the discussion, some opinions have been expressed. It may now be well to summarize some of the impressions one gets in bringing together the results of this investigation. How far these opinions are valuable will, of course, be determined in the light of what this study has brought out, and what subsequent study of Transfer Classes in this, and other school systems, may develop.

In the first place, if any such shattering of traditional educational machinery is contemplated, there must be a superintendent and staff in thorough accord on the probable worth-while-ness of the plan. Care must be taken when setting the plan in operation, that neither pupils nor teachers get the impression that transfer is an easy way to shift responsibility for poor teaching, or for lack of effort on the part of the pupils. The avoidance of anything savoring of an easy way to enter the high school is fundamental to the operation of the transfer method of advancing pupils.

There naturally arises, too, the question of grading and advancing these pupils toward graduation from the high school. Is there any danger of Transfer Classes receiving too lax treatment in the setting up of standards of attainment? In Newton this is manifestly not the case. The teacher of English gave as her opinion that the work of the transfer pupils was as good as the average of the class. To be sure, much of the work taken by transfer pupils is vocational, but success in this is, for them, far more important than success in the purely academic subjects.

As a corollary to the foregoing proposition, there is the oft-repeated, modern slogan of "adapting the school to the pupil." To many this seems more easily said than done. We must educate in large groups in our rapidly increasing school population. Although this is true, there is also the compelling truth that in these large groups we find pupils of the type cared for in the Transfer Class. And where the system is large enough to provide a class of from twenty to forty of each sex, there seems no good reason why the school should be excused from the responsibility of giving these pupils that which most of them can otherwise never secure, even in evening or continuation schools, after the need for it is seen in their attempts to become economically efficient. Continuation in school, through the medium of a Transfer Class, seems infinitely more valuable for the boy or girl too young to enter skilled industry, than the resort to a continuation school after he has blundered through the usual profitless occupations to which the unequipped are relegated. The great increase in private business schools, correspondence courses, evening, and special schools is but an indication of the fact that we are not doing our full duty in "adapting the school to the pupil," particularly the pupil who cannot be measured by our arbitrary standards.

As has been indicated, every school system has pupils of the type making up the Transfer Classes in the Newton schools. That they should be found and cared for is pedagogically and socially important; and the Transfer Class impresses one as being, at once, a practicable and efficient method of accomplishing this end.

It is apparent that the most successful work with transfer pupils is in segregated classes, and in work of a vocational type. This statement does not imply, however, that segregation should be carried beyond the one or two years required to win the grammar school diploma, or that the work should be narrowly vocational. There may be just as much unwise selection in too restricted choice of vocational work as there is in a too general choice of the traditional subjects. So far as is possible, transfer

pupils should be given the opportunity to determine vocational adaptabilities without being shunted into programs of study that will bar them from the richness of training to be found in a more widely distributed election. Concentration in the vocational courses will doubtless be the rule for transfer pupils, but with it should go such distribution as will give the wider outlook that the artisan, as well as the professional man, needs.

That vocational guidance, freer election of subjects, and greater adaptation of work to the peculiar needs of the pupils have succeeded in the conduct of the Transfer Classes in the Technical High School, is at once apparent when one recalls that these pupils show a higher distribution of grades than do the certificate pupils in the Newton High School; and this, notwithstanding the fact that none of the certificate pupils were transferred from below the eighth grade, while many of the transfer pupils in the Technical High School came from grades six and seven. The certificate pupils, some of whom are yet coming to the Newton High School, were, and are, a distinctly stronger group than the transfer pupils in the Technical High School. However, the transfer plan succeeded under less favorable conditions in the Newton High School, and with less capable pupils, to an even greater degree, in the Technical High School.

Follow-up work should be a part of the duty of those in charge of Transfer Classes. A study of this phase of the movement will be possible owing to the work done by Miss Laselle and the complete records kept in the Commercial department of the Technical High School — the department to which most of the transfer pupils go for regular high school work.

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